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Serial No. 10/613,380

Customer No. 23379

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Docket No. UCSF03-114

Examiner: Skibinsky, Anna

Title: *Protein Logic Gates*

CERTIFICATE OF TRANSMISSION

I hereby certify that this corr is being transmitted by facsimile to  
the Comm for Patents 571-273-8300 on February 5, 2006.

Signed

  
Richard Aron Osman

RESPONSE

United States Patent & Trademark Office  
P.O. Box 1450  
Alexandria, VA 22313-1450

Dear Examiner Skibinsky:

Thank you for the Restriction dated Jan 19, 2006.

We elect with traverse: output domain "Neuronal Wiskott-Aldrich Syndrome Protein (N-WASP) WA domain" (see e.g. p.21, lines 4-5); and input domains (i) PDZ domain of  $\alpha 1$ -syntrophin (e.g. p.22, line 5) and (ii) SH3 domain of Crk adaptor protein (e.g. p. 23, line 23 – p.24, line 1; p.10, line 10).

The invention encompasses autoregulated fusion proteins comprising an output domain and a plurality of input domains, wherein at least one of the input domains is heterologous to the output domain, and the input domains interact with each other to allosterically and external, ligand-dependently regulate the output domain. The selected input and output domains are discretionary to the user according to intended use, and essentially any output domain providing a desired activity or binding affinity may be employed, so long as output activity can be

regulated by ligand-dependent interaction of the input domains (e.g. p. 6, lines 13-15). Similarly the selection of input domains is user discretionary, so long as the selected domains interact to provide the requisite ligand-dependent gating of the output domain (e.g. p.7, lines 18-19). The invention is not directed to any unrelated structures or distinct sequences; the imposed restriction is not consistent with the invention as claimed.

The Examiner is invited to call the undersigned with any suggestions for amending the claims or further clarifying any of the foregoing. Please charge any necessary fees or time extensions or credit any overcharges relating to this communication to our Dep. Acct. No.19-0750 (order UCSF03-114).

Respectfully submitted,  
Science & Technology Law Group



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